

Be On The Lookout for Black Knot

Find this article at:
go.ncsu.edu/readext?1078038

— Written By [Doug Clement](#)

[en Español / em Português](#)

Black knot, caused by the fungus *Apiosporina morbosa* (formerly *Dibotryon morbosum*), is a common and often disfiguring disease affecting plum and cherry trees, including both cultivated and wild varieties. If left unmanaged, it can severely impact fruit production and the overall health of infected trees.

Symptoms and Signs include:

- Early Stage (Autumn after infection): Inconspicuous, light brown swellings on current season's shoots. These may be hard to notice.
- Spring (following year): As growth resumes, the bark splits, and the knots appear greenish and corky with a velvety texture.
- Late Summer/Fall (second year): Knots harden and turn black. They are typically elongated swellings, 1-6 inches or more in length, and can be scattered throughout the tree. Diseased twigs may bend due to one-sided overgrowth.
- Progression: Over time, the knots enlarge, becoming more warty and brittle. If the knot encircles or "girdles" a branch, it can lead to wilting, failure to leaf out, or dieback of the branch beyond the knot.
- Older Knots: May appear lighter brown and start to disintegrate.

The fungus overwinters in the black knots on infected stems and branches. In the spring, during rainy periods, infective spores (ascospores) are forcibly ejected from mature knots and carried by wind and splashing rain to new growth. Infection occurs from April through June on current season's growth, especially during warm, wet weather (optimal at temperatures above 55°F). It can take several months between infection and the visible appearance of knots. Initial

swellings appear in the autumn of the infection year, and they fully develop into hard, black knots by the end of the second year. The older knots can continue to produce spores for several years.



Management Strategies include:.

- Pruning: This is the most crucial step. Remove all knots and swellings during the dormant season (late winter/early spring), ideally before April 1st and before bud break. This is when the knots are most visible and before spores are released.
- Cutting: Make cuts 4-8 inches *below* the visible knot to ensure all infected tissue is removed. The fungus can extend beyond the visible swelling.
- Large Branches/Trunk: For knots on larger branches or the main trunk, carefully excise the infected tissue down to healthy wood, extending at least 1-2 inches beyond the visible knot in all directions.
- Sanitation: Sterilize pruning shears with 70% rubbing alcohol or a 10% bleach solution after *each* cut to prevent spreading the disease.

- Disposal: Immediately remove and destroy (burn or bury deeply) all pruned material. Do not leave infected clippings on the ground or compost them, as they can continue to be a source of spores.
- Remove Wild Hosts: Wild plum and cherry trees in nearby fence rows and wooded areas can serve as a continuous source of infection. Remove these hosts within at least 600 feet of your cultivated trees if practical.
- Select Resistant Varieties: When planting new plum trees, choose varieties that show some resistance to black knot. Moderately resistant plum varieties include Damson, Bluefree, Shiro, Santa Rosa, Formosa, Methley, Milton, Early Italian, Bradshaw, Fellenberg, Castleton, Seneca, NY9, and Au Rosa. Highly susceptible varieties include Stanley, Earliblue, and Rosy Gage.
- Inspect Nursery Stock: Always purchase disease-free trees from reputable nurseries. Avoid any trees with visible knots or swellings.

Black knot is a slowly developing disease. Early detection and consistent management are key to control. Managing an established infection may take 2-3 years of diligent effort. Do not confuse black knot with crown gall, a bacterial disease that can cause galls on branches, but which typically appear lighter in color and smoother than black knot galls.

WRITTEN BY



Doug Clement

County Extension Director, Agriculture, Community Development, and Firewise
N.C. Cooperative Extension, Cherokee County Center

UPDATED ON JUN 16, 2025